



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,004	01/22/2004	Seiji Aiso	MIPFP077	8937
25920 7590 12/17/2007 MARTINE PENILLA & GENCARELLA, LLP 710 LAKEWAY DRIVE SUITE 200 SUNNYVALE, CA 94085			EXAMINER KRASNIC, BERNARD	
			ART UNIT 2624	PAPER NUMBER
			MAIL DATE 12/17/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/764,004	Applicant(s) AISO, SEIJI	
	Examiner Bernard Krasnic	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 23 and 24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 23 and 24 is/are rejected.
- 7) ☒ Claim(s) 7 and 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. The amendment filed 10/18/2007 have been entered and made of record.
2. The application has pending claim(s) 1-8 and 23-24.

3. In response to the amendments filed on 10/18/2007:

The "Objections to the specification" have been entered and therefore the Examiner withdraws the objections to the specification.

The "Objections to the claims" have been entered and therefore the Examiner withdraws the objections to the claims.

The "Claim rejections under 35 U.S.C. 101" have been entered and therefore the Examiner withdraws the rejections under 35 U.S.C. 101.

4. Applicant's arguments filed 10/18/2007 have been fully considered but they are not persuasive.

The Applicant alleges, "The Herman reference discloses a method and apparatus for mosaic image ..." in page 10 and "Accordingly, for at least the foregoing ..." in page 10, and states respectively that the prior art reference Herman does not disclose or suggest determining, on the basis of image quality setting data that can set the image quality of the output image, a number of frames of data to be acquired as recited in claim 1. However the Examiner disagrees because Herman does disclose

using image quality setting data to carry out this image generation. Herman discloses (a) determining on the basis of image quality setting data / source image selection (102) that allows setting of image quality / good quality of the output image, a number of frames of data / set of source images for acquisition from the video data / video sequence, and acquiring / selecting the determined number of frames of data from the video data (see Fig. 1, col. 4, lines 22-27, Step 1: Source Image Selection); and (b) synthesizing the acquired number of frames of data and generating / merging (106) the image data / mosaic image (see Fig. 1, col. 5, lines 47-49, Step:5 Merging). Herman once again does determine / selection process finds manually or automatically the number of frames / a set of images needed for generating the image data / combine into a mosaic on the basis of image quality setting data / good quality images covering the intended domain and content of the mosaic. Therefore claim 1 and similarly claims 23 and 24 are still not in condition for allowance and are still not patentably distinguishable over the prior art reference. Claim 2 which is dependent from claim 1 is likewise still not in condition for allowance.

The Applicant alleges, "Applicant respectfully requests reconsideration of the rejection of claims 3 and 4 ..." in pages 10-11, and states respectively that the prior art reference Miyake does not cure the above-discussed deficiencies of the Herman reference relative to the subject matter defined in amended claim 1. However the Examiner disagrees because as discussed above Herman does teach the relative subject matter [determining the number of frames for generating the image data on the basis of image quality setting data respectively] as defined in amended claim 1. The

Miyake reference was used to teach claims 3 and 4 by disclosing to increase the number of the frames acquired / increase the number of frames when the image quality setting data / setting upper limit b [similar to Herman's image quality setting data / good quality images covering the intended domain and content of the mosaic] indicated a higher image quality need / need to further enhance image quality (see col. 10, lines 65-67, abstract, lines 1-2). Therefore claim 3 and similarly claim 4 are still not in condition for allowance and are still not patentably distinguishable over the prior art references.

The Applicant alleges, "Applicant respectfully requests reconsideration of the rejection of claims 5 and 6 ..." in pages 11-12, and states respectively that the prior art reference Inuzuka does not cure the above-discussed deficiencies of the combination of the Herman and Miyake references relative to the subject matter defined in claim 1. However the Examiner disagrees because as discussed above Herman does teach the relative subject matter [determining the number of frames for generating the image data on the basis of image quality setting data respectively] as defined in amended claim 1. The Inuzuka reference was used to teach determining the number of frames required for acquisition [Herman discloses determining the number of frames required for acquisition using image quality setting data] on the basis of the total number of pixels in the frame data (see Inuzuka, col. 1, lines 47-48, in order to increase the image quality, a larger number of pixels in each frame is needed and a larger number of frames is needed / increase the frame rate). Therefore claim 5 and similarly claim 6 are still not in condition for allowance and are still not patentably distinguishable over the prior art

references. The Examiner though would like to point the Applicant to the Allowable Subject Matter Section of this Final Office Action.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-2, and 23-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Herman et al (U.S. 6,075,905, as applied in previous Office Action).

Re Claim 1: Herman discloses an image generating method / mosaic image construction for acquiring a plurality of frames / selecting source images of data from video data / images from a sequence of frames having a multitude of frames of data (see Fig. 1, col. 2, lines 65-67, col. 3, lines 1-3), the data representing tones / color, contrast, and intensity of an image by means of a multitude of pixels / digital image (see col. 1, line 11), and synthesizing the plurality of frames of data to generate image data / mosaic image for representing by means of multitude of pixels the tones of an output image for an image output device (see Fig. 1, col. 2, lines 65-67, col. 3, lines 1-3), the method comprising the steps of (a) determining, on the basis of image quality setting data / source image selection (102) that allows setting of image quality / good quality of the output image, a number of frames of data / set of source images for acquisition from the video data / video sequence, and acquiring / selecting the determined number of

frames of data from the video data (see Fig. 1, col. 4, lines 22-27, Step 1: Source Image Selection); and (b) synthesizing the acquired number of frames of data and generating / merging (106) the image data / mosaic image (see Fig. 1, col. 5, lines 47-49, Step 5: Merging).

Re Claim 2: Herman further discloses the steps of (c) acquiring, on the basis of the plurality of frames of data / source images, deviation data / alignment parameter data representing deviation / shift, rotate, dilate, or/and projective among images / source images represented by the plurality of frames of data (see Fig. 1, col. 4, lines 43-52, Step 2: Image Alignment); and (d) performing a conversion process / alignment (103) wherein, on the basis of the acquired deviation data, at least one of the respective images represented by the plurality of frames of data is moved / shifted, rotated, dilated, or/and projected to convert at least one of the plurality of frames / source images of data in order to reduce deviation / each is in registration with corresponding portions among images (see Fig. 1, col. 4, lines 43-52, Step 2: Image Alignment), wherein the step (b) synthesizes the plurality of frames of data / selecting source images (102) subjected to the conversion process / alignment (103) and generates / merging (106) the image data / mosaic image (see Fig. 1, col. 2, lines 65-67, col. 3, lines 1-3).

As to claim 23, the claim is the corresponding system claim to claim 1 respectively. The discussions are addressed with regard to claim 1.

As to claim 24, the claim is the corresponding computer readable medium for storing a program claim to claim 1 respectively. The discussions are addressed with regard to claim 1.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herman in view of Miyake (U.S. 6,804,419 B1, as applied in previous Office Action). The teachings of Herman have been discussed above.

However, as recited in claim 3, Herman fails to specifically disclose that higher image quality indicated by the image quality setting data, increases the number of the frames acquired.

Miyake discloses higher image quality / enhancing image quality indicated by the image quality setting data / setting upper limit of b, increases the number of the frames acquired / increase number of frames for use (see col. 10, lines 65-67).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Herman's method using Miyake's teachings by specifically including to Herman's Image Selecting Step the idea that the image quality increases as the number of frames increases in order to enhance the interpolation for

generating the high resolution image from these lower resolution frame images (see Miyake, col. 10, lines 65-67, abstract, lines 1-2).

As to claim 4, the discussions are addressed with respect to claim 3.

9. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herman as modified by Miyaki, and further in view of Inuzuka et al (U.S. 6,784,891 B2, as applied in previous Office Action). The teachings of Herman as modified by Miyaki have been discussed above.

Herman as modified by Miyake, as recited in claim 5, further discloses that the number of frames of data / selected source images [Herman teaches the selected source images, col. 4, lines 22-27, Fig. 1, Source Image Selection] for acquisition / selection [Herman teaches the selection, col. 4, lines 22-27, Fig. 1, Source Image Selection] is determined on basis of the image quality setting data / source image selection (102) [Herman teaches the source image selection 102, col. 4, lines 22-27, Fig. 1, Source Image Selection, Miyaki teaches that the higher image quality results in the need for an increase in the needed acquisition of number of frames] and acquires the determined number of frames of data from the video data / video sequence [Herman, col. 4, lines 22-28].

However, Herman as modified by Miyaki fails to specifically disclose that the number of frames of data for acquisition is determined on basis of the total number of pixels in the frame data.

Inuzuka discloses the number of frames of data for acquisition is determined on basis of the total number of pixels in the frame data (see col. 1, lines 47-48, "in order to enhance an image quality, the number of pixels and frame rate are increased", higher image quality results in the need for a larger number of pixels in each frame and Miyaki teaches above that image quality determines the number of frames needed).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify Herman's method, as modified by Miyaki, using Inuzuka's teachings by including to Herman's Image Selecting Step the idea that the image quality increases as the number of pixels in each frame increases allowing Herman's Image Selecting Step to further consider the number of pixels in each frame when determining the number of source images that are desirable to construct Herman's mosaic in order to further provide a relationship between the concept of number of pixels needed for a certain image quality and for a certain number of frames needed (see Inuzuka, col. 1, lines 47-48).

As to claim 6, the discussions are addressed with respect to claim 5.

Allowable Subject Matter

10. Claims 7 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Baek et al discloses a high resolution imaging system.

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernard Krasnic whose telephone number is (571) 270-1357. The examiner can normally be reached on Mon-Thur 8:00am-4:00pm and every other Friday 8:00am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on (571) 272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:
10/764,004
Art Unit: 2624

Page 11.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Bernard Krasnic
December 12, 2007



JINGGE WU
SUPERVISORY PATENT EXAMINER